of the known compatible species were found in the South Indian Ocean islands and the African East Coast, these areas are the likely ancestral home of the early forms involved in the *H. rosa-sinensis* complex. The trade routes, of course, have had a great influence on plant distribution. In the case of hibiscus, it should be recorded here that following the discovery of the passage around the Cape of Good Hope by VASCO DE GAMA in 1497 and the subsequent establishment of Portuguese and Spanish trading centres in India and other Asian countries, the Mascarene islands, Madagascar and the African East Coast were colonized and became regular ports of call. In the Atlantic, the Canary Islands and Madeira were also favoured by returning trading vessels on the Cape of Good Hope route, and in 1798 Spain established the Orotava Botanic Garden on the island of Tenerife as an acclimatizing station for plants from Asia and the tropics. Thus, some of the oldest forms of *H. rosa-sinensis* may be found there.

THE GENETICALLY COMPATIBLE SPECIES

The known species genetically compatible with all forms of *H. rosa-sinensis* and with one another are *H. schizopetalus*, an African East Coast species; *H. liliiflorus* from Mauritius and Rodriguez Island; *H. fragilis* and *H. boryanus* from Réunion Island; *H. arnottianus* and *H. kokio* (several forms of both) from Hawaii; *H. storckii* from Fiji, and *H. denisonii*, origin unknown. Most authorities agree that from these species —and perhaps some additional undetermined additional species—all forms of *H. rosa-sinensis* have evolved. It is quite possible, too, that among the many forms of hibiscus currently considered under *H. rosa-sinensis* there may be some that are, in fact, true species separable from this complex when it is understood more fully.

A comprehensive project having as its objective the development of hardier ornamental hibiscus cultivars was brought to Los Angeles State & County Arboretum in 1958 by the writer, who has been collecting and hybridizing both the older forms and the species of this genus for many years. Each season, these old forms, the several species, and their derivatives serve as parents of 2,000-3,000 seedlings produced for observation and additional breeding. During the past three years, the original collection has been increased by personal collections in Mauritius, Madagascar, East Africa, Singapore, Tenerife, Fiji and India.

Results of breeding work at Arcadia indicate that the geographical range of ornamental hibiscus can be greatly extended by selection of climatically "tailored" cultivars. It has been observed, for instance, that frost losses are minimized when cultivars with strong root systems resistant to low soil temperatures and excess soil moisture are planted. Efforts have been directed primarily toward the production of cultivars with this character. Selection of parent plants for this programme has been influenced to a large extent by the recorded "on the spot" observations of the author of forms of *H. rosa-sinensis* found growing in parts of the

world considered marginal for ornamental hibiscus. Most of these forms have clear morphological evidence of their genetic origin, and with all of the species now available that are known to be cross-compatible, it is possible to select parents which will produce these hardier cultivars in many forms and colours. A large number of these LASCA hybrids are under observation in public and private plantings, not only in Southern California, but in areas in Australia, New Zealand, and Africa where climatic conditions do not permit the best development of the more sophisticated modern hybrids adapted to strictly tropical countries.

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A morotist was driving in the country when suddenly his car stopped. He got out and was checking the spark plugs when an old horse came trotting up the road.

"Better check the gas line," the horse said and trotted on.

The motorist ran to the nearest farmhouse and told the farmer what had happened.

"Was it an old horse with a flopping ear?" asked the farmer.

"Yes! Yes!" cried the man.

"Well sir," said the farmer, "don't pay any attention to him. He doesn't know much about cars."